

REMARKS

Applicant has studied the Office Communication dated October 28, 2003, and has made amendments to the specification, claims, and title and drawings. Claims 2-5 and 7-20 have been canceled without prejudice; claims 1 and 6 have been amended; and new claims 21-24 have been added. It is submitted that the application, as amended, is in condition for allowance. Reconsideration and reexamination are respectfully requested.

Claim Rejections - 35 U.S.C. § 102

Claims 1, 5 and 8 have been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,034,734, issued to De Haan, et al. (hereinafter referred to as "the De Haan reference"). The De Haan reference teaches a scan conversion method of generating an output video signal from an interlaced input signal whereby the output video signal is a sequentially scanned video signal.

The Examiner asserts that the De Haan reference discloses all claimed subject matter.

Applicant respectfully submits that the claimed invention is patentably different from the setup in the De Haan reference. Specifically, there is absolutely no teaching, suggestion or inference of any kind, explicit or implicit, in the De Haan reference in regard to at least one field motion estimator receiving image input of interlaced scanning format from at least one field buffer, as recited in amended claim 1. In fact, the De Haan reference teaches away from Applicant's invention. As shown in Fig. 1, motion estimator 13 receives image input from initial sequential scan converter 1 and motion compensation stage 7, respectively, not from field memory 5 or field memory 11. Also, in "FIG. 1, an interlaced input signal is applied from an input I to an initial sequential scan converter 1 ... ", (col. 10, lines 50-52). There is no mention at all of interlaced input signals being applied to motion estimator 13 directly of Fig. 1.

Claims 2, 4, 5, 12, 13 and 15 have been cancelled, thereby rendering the Examiner's claim rejections thereto moot.

Applicant respectfully submits that for a reference, such as the De Haan reference, to function under 35 U.S.C. § 102, the reference must within the four corners of that document disclose each and every element which is set forth in the claim against which it is applied. Furthermore, every element of the claimed invention, as recited in the claims, must be disclosed either specifically or inherently by a single prior art reference. See *Minnesota Mining & Mfg. Co.*

v. Johnson & Johnson Orthopaedics, Inc., 976 F.2d 1559, 1565 (Fed.Cir.1992); *Scripps*, 927 F.2d at 1576-77; *Lindemann Maschinenfabrik GMBH, v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458 (Fed.Cir.1984). Since the De Haan reference does not anticipate in any way Applicant's claimed structure and method, Applicant respectfully requests withdrawal of the 102(e) claim rejections.

Claim Rejections - 35 U.S.C. § 103

Claims 3, 6-11, 14, and 16-20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the De Haan reference.

Claims 3, 7-11, 14, and 16-20 have been cancelled, thereby rendering the Examiner's claim rejections thereto moot.

In regard to claim 6, the Examiner admits that the De Haan reference does not specifically disclose a frame motion estimator and a frame motion compensator. However, the Examiner asserts that processing according to the De Haan reference may be done in both the field and frame. The De Haan reference discloses "a time-recursive de-interlacing algorithm ... in which the lines that need to be interpolated are found by motion compensating the previously found de-interlaced output frame" (col. 4, lines 18-29). The Examiner further asserts that field and frame motion estimation and compensation techniques are well known in the art, and that it would have been obvious to one having ordinary skill in the art at the time the invention was made to integrate the processing of frame/field motion estimation and compensation, since it has been held to be within the general skill of a designer in the art to make plural paths unitary as a matter of obvious engineering choice.

Applicant respectfully submits that there is no teaching, suggestion or motivation of any kind, explicit or implicit, in the De Haan reference in regard to adapting its apparatus to include at least one field motion estimator, which receives image input of interlaced scanning format from at least one field buffer, as recited in amended claim 6.

The Examiner also admits that the De Haan reference does not specifically disclose an edge-preserving filter. However, the Examiner asserts that it would have been obvious to the skilled in the art to modify the De Haan reference by providing such a filter so that the overall appearance of the video image is improved.

3
Applicant respectfully submits that that there is no teaching, suggestion or motivation of any kind, explicit or implicit, in the De Haan reference in regards to modifying its architecture to include at least one edge-preserving filter which is operatively coupled between at least one field motion compensator and at least one linear interpolator, whereby the linear interpolator produces image output of progressive scanning format, as recited in amended claim 6. In fact, the De Haan reference teaches exactly the opposite by reciting interpolated lines being "applied to the motion compensation stage 7" (col. 10, lines 55-56, see also Fig. 1).

It appears that the Examiner is using Applicant's disclosure in hindsight as an instruction manual to propose various modifications and subsequent combinations of modified structures in an attempt to produce the claimed invention.

In view of the foregoing amendments and remarks, Applicant respectfully requests withdrawal of the 103(a) claim rejections.

Conclusion

No amendment made was related to the statutory requirements of patentability unless expressly stated herein; and no amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California, telephone number (213) 623-2221 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,
Lee, Hong, Degerman, Kang & Schmadeka

Date: February 26, 2004

By: 

Amit Sheth

Registration No. 50,176
Attorney for Applicant

Lee, Hong, Degerman, Kang & Schmadeka
801 S. Figueroa Street, 14th Floor
Los Angeles, California 90017
Telephone: 213-623-2221
Facsimile: 213-623-2211